PUBLIC PAGE

Quarterly Report – Public Page

For Period Ending: June 27, 2010

Contract Number: DTPH56-09-T-000003

Prepared for: United States Department of Transportation
Pipeline and Hazardous Materials Safety Administration
Office of Pipeline Safety

Project Title: "Determine New Design and Construction Techniques for Transportation of Ethanol and Ethanol/Gasoline Blends in New Pipelines, #394"

Prepared by: Mr. Mark Yunovich
Principal Investigator
Honeywell International Inc.
11201 Greens Crossing Blvd., Ste 700
Houston, TX 77067
Mark.Yunovich@Honeywell.com

Ian Wood
Team Project Manager
Electricore, Inc.
27943 Smyth Drive, Suite 105
Valencia, CA 91355
ian@electricore.org

Background

This project address ethanol gaps identified at The Safe & Reliable Ethanol Transportation & Storage Technical Road Mapping Workshop held in Dublin, Ohio in October 2007. Several key areas are addressed which directly support the PHMSA mission for public safety, including: Safety of Transporting Blends Containing More than 10 Percent Ethanol (Requirements for pipelines to handle FGE – E95); Phenomenological Understanding of Ethanol SCC (Understanding and Use of metallurgical, welding and surface treatments to mitigate SCC). The project will improve pipeline safety by supplying key information necessary to address gaps in industry and regulatory knowledge for the design and construction of ethanol and ethanol/gasoline blend pipelines.

The objectives of the project are:

1. Develop supporting data, related analysis and recommendations for cost-effective design and construction methods for reducing the effects of eSCC that can be implemented in new pipeline systems to allow safe and efficient transportation of Fuel Grade Ethanol (FGE).
2. Evaluate design aspects for control and monitoring of oxygen uptake and internal corrosion for pipelines transporting FGE
3. Recommend the most advantageous direction for expanded and improved pipeline design and testing standards for operations involving exposure to FGE

Progress in the Quarter

Task 1.1: Evaluation of Steel Microstructure Effect on Ethanol SCC Resistance

Honeywell has completed the metallurgical characterization of the six steel pipes provided by EWI and the team has made a final selection of the Type A materials.

Honeywell is currently machining the notched slow-strain-rate (N-SSR) specimens from the Type A steels. They anticipate that the N-SSR test results for the Type A steels will be available by the middle of July. Meanwhile, they will also initiate the machining of specimens for the available Type B steels.

Task 2.1 Control and Monitoring of Oxygen Uptake Initiated

Task 2.2 Internal Corrosion Monitoring

Task 2.3a Standardization of SCC Test Method

The team has initiated work on Tasks 2.1, 2.2, and 2.3a, and the former two are nearly complete.

The project team held an internal meeting at Honeywell in the month of April with the program consultants to discuss topics related to the development guidelines for ethanol service. They also discussed recommendations for incorporating the results from this Task into the API 939E documents.

Project Management and Reporting

The project team participated in the DOT Research Project Peer Review. Honeywell also attended the PRCI Pipeline Technical Committee Meetings held at Galveston, TX in May 2010 and the project was briefly discussed in the corrosion technical committee session.

Plans for Future Activity

Over the next quarterly reporting period the team will undertake the following activities:

- Completion of N-SSR tests on all available Type A steels and results provided to the project team.
- Completion of machining of specimens from Type B steels.
- Decision on which Type A pipe to use for Tasks 1.2 and 1.3.
- Initiation of SCC tests under Task 1.2.
- Procurement of remaining Type A and Type B steels.
- Completion of Task 1.5**.**
- Complete and Submit Monthly Status Reports.
- Revision of the draft deliverables for Tasks 2.1 and 2.2.